

SUPPORT FOR THE AMENDMENT

Support for the amendment to claim 1 is found on page 5, lines 21-24 of the specification. No new matter would be added to this application by entry of this amendment. Amended claim 1 sufficiently corresponds with claim 1 as originally presented, which was identified as substantially identical to claim 1 of the corresponding Japanese application. No claim correspondence table is believe to be necessary as the amendment is merely to clarify the basis for calculating wt.%.

Upon entry of this amendment, claims 1-2 and 6-11 will remain active in this application.

REQUEST FOR RECONSIDERATION

The claimed invention is directed to a packaged beverage.

Applicants wish to thank examiners Thakur and Weinstein for the helpful and courteous discussion held with their U.S. representative on January 8, 2008. At that time, applicants' U.S. representative argued that in spite of any general motivation to have oxalic acid and caffeine in a catechin-containing composition, the claimed ratio of oxalic acid to non-polymer catechins and ratio of non-polymer catechins to caffeine was not anticipated by the cited references and that applicants observed an unexpected improvement in bitterness, astringency and color tone stabilities when the ratios are as claimed. The following is intended to expand upon the discussion with the examiners.

Catechin-containing beverages are sought in view of disclosed physiological affects. Tea, especially green tea, is a known source of catechins. However, in order to obtain a physiological effect, from 4-5 cups of green tea per day of tea would need to be consumed. Such low concentrations of catechins have lead to a search for catechin-containing beverages

of increased catechin concentration which may be consumed in the absence of strong bitterness and astringency yet possess good color storage stability.

The claimed invention addresses this problem by providing a packaged beverage comprising non-polymer catechins, oxalic acid and caffeine wherein the ratio of oxalic acid to non-polymer catechins is from 0.005 to 0.05 and the ratio of non-polymer catechins to caffeine is from 10-10,000. Applicants have discovered that a packaged beverage containing non-polymer catechins, oxalic acid and caffeine in the ratios claimed possess good storage stability relative to bitterness and astringency as well as color tone. Such a composition is nowhere disclosed or suggested in the cited references of record.

The rejection of claims 1-2 and 7-11 under 35 U.S.C. § 103 over Ohishi et al. (U.S. 2003/0077347) in view of Tsai et al. (U.S. 4,946,701) and of claim 6 in further view of Kuznicki et al. (U.S. 5,681,569), Ekanayake et al. (U.S. H001628H) and Broz (U.S. 2002/0197376) are respectfully traversed.

None of the cited references discloses or suggests a composition having the claimed ranges of non-polymer catechins to oxalic acid and non-polymer catechins to caffeine nor the improved storage stability properties resulting therefrom.

Ohishi et al. has merely been cited for a disclosure of a non-polymer catechin-containing composition. Caffeine has been assumed by the examiner to be a known component in a tea composition. Tsai et al. has been cited for a teaching of the addition of caffeine to a tea beverage. However, neither of the references disclose or suggest the claimed ratio of oxalic acid to non-polymer catechins or ratio of non-polymer catechins to caffeine. In addition, none of the examples of Ohishi et al. have both a ratio of oxalic acid to non-polymer catechins and non-polymer catechins to caffeine, each of which is within the claimed ranges. As the reference fails to disclose or suggest any relationship between the ratio of oxalic acid to non-polymer catechins or the ratio of non-polymer catechins to caffeine, the

claimed ratios are non obvious from the cited references. There simply is no motivation to adjust the ratios to be within those claimed.

Furthermore, while the examiner has relied on the reference of Tsai et al. for **motivation to increase** the caffeine concentration of a tea beverage, applicants note, that the claimed ratio of non-polymer catechins to caffeine is from 5-10,000. Thus, the amount of non-polymer catechins is at least five times that of the amount of caffeine. As Tsai et al. describes **increasing the caffeine content**, the claimed ratio of 5-10,000 would not have been obvious as the addition of caffeine to a green tea-containing composition would act to **reduce the ratio of non-polymer catechins to caffeine**. In view of the examiner's identification of the motivation to increase the caffeine content, a ratio of non-polymer catechins to caffeine of 5 to 10,000 is not obvious. As such, the claimed invention would not have been obvious from the cited references and accordingly the withdrawal of the rejections under 35 U.S.C. § 103(a) is respectfully requested.

Moreover, applicants observed an unexpected improvement in bitterness, astringency and color tone stabilities when the ratio of oxalic acid to non-polymer catechins and non-polymer catechins to caffeine is within the claimed range. The examiner's attention is directed to the data appearing in Table 1 on pages 29-31 of applicants' specification is reproduced below.

[Table 1]

| Formulations | Ex. 1 | Ex. 2 | Ex. 3 | Ex. 4 | Ex. 5 | Comp. Ex. 1 | Comp. Ex. 2 | Comp. Ex. 3 |
|---|---------|---------|---------|---------|---------|----------------|----------------|----------------|
| Green tea extract A | 1.00 | - | - | 1.00 | | - | - | - |
| Green tea extract B | - | - | 0.60 | - | | - | - | - |
| Green tea extract C | - | 0.08 | - | - | | - | - | - |
| Green tea extract D | - | 0.20 | - | - | 0.97 | - | 0.10 | - |
| Green tea extract E | - | - | - | - | 0.02 | 2.31 | | 0.77 |
| Ascorbic acid | 0.030 | 0.030 | 0.030 | 0.030 | 0.030 | 0.030 | 0.030 | 0.030 |
| Oxalic acid | - | - | - | - | - | - | - | 0.022 |
| Citric acid | 0.200 | 0.200 | 0.200 | 0.200 | 0.200 | 0.200 | 0.200 | 0.200 |
| Trisodium citrate | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 |
| Artificial sweetener | 5.000 | 5.000 | 5.000 | 3.000 | 5.000 | 5.000 | 5.000 | 5.000 |
| Glucose | - | - | - | 2.000 | - | - | - | - |
| Sodium chloride | 0.050 | 0.050 | 0.050 | 0.050 | 0.050 | 0.050 | 0.050 | 0.050 |
| Potassium chloride | 0.020 | 0.020 | 0.020 | 0.020 | 0.020 | 0.020 | 0.020 | 0.020 |
| Fruit extract | 0.050 | 0.050 | 0.050 | 0.050 | 0.050 | 0.050 | 0.050 | 0.050 |
| Flavor ingredient | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 |
| Deionized water | Balance | Balance | Balance | Balance | Balance | Balance | Balance | Balance |
| Total amount | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| pH of beverage | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.6 | 3.5 | 3.6 |
| Non-polymer catechins (wt%) | 0.22 | 0.19 | 0.13 | 0.22 | 0.79 | 0.51 | 0.90 | 0.17 |
| Non-polymer catechins/caffeine ratio | 20.00 | 42.20 | 60.00 | 20.0 | 575 | 3.20 | 12000 | 3.20 |
| Oxalic acid/non-polymer catechins ratio | 0.01 | 0.009 | 0.003 | 0.01 | 0.0009 | 0.07 | 0.00001 | 0.19 |
| Non-polymer catechins/caffeine ratio in preparation | 20 | 42.2 | 60 | 20 | 575 | 3.2 | 12000 | 3.2 |
| Na content in beverage (mg/100 mL) | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 |
| K content in beverage (mg/100 mL) | 44 | 20 | 29 | 44 | 10 | 93 | 6 | 35 |
| Long-term drinkability | A | A | A | A | B | D | D | D |
| Stability of bitterness and astringency | A | A | A | A | B | D | C | D |
| Feeling as the beverage passed down the throat | A | A | A | A | A | D | B | D |
| Color tone stability | A | A | A | A | A | D | C | D |

Comparative examples 1-3 each have ratios of non-polymer catechins to caffeine either below (Comp. Ex. 1 and 3) or above (Comp. Ex. 2) the claimed range. In addition, the ratio of oxalic acid to non-polymer catechins in Comp. Ex. 2 was below the claimed range while the ratio of oxalic acid to non-polymer catechins in Comp. Ex. 3 was above the claimed range. In each of the comparative examples, the color tone stability was either demonstrative of **substantial change or change**. Further, the bitterness and astringency was judged to be **substantially changed or changed** upon storage.

In contrast, each of Examples 1-5 in which the ratios of oxalic acid to non-polymer catechins and non-polymer catechins to caffeine was **within the claimed range** all exhibited **no change** in color tone stability upon storage and **no change or only slight change** in stability of bitterness and astringency upon storage. Thus, by formulating a composition to have the ratios of oxalic acid to non-polymer catechins and non-polymer catechins to caffeine as claimed, applicants observed improved color tone stability as well as stability to bitterness and astringency. These results are nowhere disclosed or suggested in the cited reference.

As the claimed ratio of non-polymer catechins to caffeine is not suggested by the combined teaching of the references and applicants observe an improvement in storage stability from the claimed ratios, the claimed invention is clearly non-obvious from the cited references and accordingly withdrawal of the rejection under 35 U.S.C. § 103(a) is respectfully requested.

The secondary references fail to cure the basic deficiencies of the primary references.

Kuznicki et al. has been cited for a disclosure of a beverage that contains tea solids, electrolytes and carbohydrates. The reference fails to disclose or suggest the claimed ratios of oxalic acid to non-polymer catechins or non-polymer catechins to caffeine.

Ekanayake et al. has been cited as further evidence that salts act as buffers for tea extracts. However, the reference fails to disclose or suggest the claimed ratio of oxalic acid to non-polymer catechins or non-polymer catechins to caffeine.

Broz has been cited for disclosure of the use of sodium and potassium salts that act as buffers to improve the taste of a beverage. The reference fails to disclose or suggest the claimed ratios of oxalic acid to non-polymer catechins or non-polymer catechins to caffeine.

As the cited references fail to disclose or suggest the claimed ratio of oxalic acid to non-polymer catechins or non-polymer catechins to caffeine nor the improvement in storage stability resulting therefrom, the claimed invention is clearly not rendered obvious from the references and accordingly the withdrawal of the rejections under 35 U.S.C. § 103(a) is respectfully requested.

The provisional rejection of claims 1-2, 6-9 over claims 1, 3-5 and 8 over co-pending application 10/582,873 in view of Tsai et al. is respectfully traversed.

U.S. '873 fails to claim or render obvious the claimed ratio of non-polymer catechins to caffeine. None of claims 1 or 3-8 of U.S. '873 claim caffeine and accordingly do not render obvious the claimed ratio nor the improved storage stability resulting from the claimed ratio. Withdrawal of this provisional ground of rejection is respectfully requested.

The provisional rejection of claims 1-2 and 6-11 under grounds of non-statutory obviousness-type double patenting over claims 1, 5, 6, 8 and 10 over application 10/583,558 is respectfully traversed.

U.S. '558 fails to suggest the claimed ratio of non-polymer catechins to caffeine. None of claims 1 or 3-10 reference caffeine in any way, shape or form and accordingly cannot render obvious the claimed ratio of non-polymer catechins to caffeine nor suggest the improved storage stability resulting therefrom and accordingly withdrawal of this provisional ground of rejection is respectfully requested.


The provisional rejection of claims 1-2, 6-7 and 9 under grounds of non-statutory obviousness-type double patenting over claims 1-6, 8, 11-16, 18, 21, 25, 26 and 28 of co-pending application 11/258,892 is respectfully requested to be held in abeyance until which time allowable subject matter is indicated.

Finally, applicants respectfully request acknowledgement of consideration of applicants Information Disclosure Statement filed on August 18, 2006 by dating and initialing the previously submitted PTO-1449 form. While applicants' PTO-1449 form submitted August 18, 2006 was attached to the outstanding office action, the form was not initialed and dated by the examiner to indicate that the two references were considered by the examiner.

Applicants submit that this application is now in condition for allowance and early notification of such action is earnestly solicited.

Respectfully submitted,

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